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ORIGINAL LECTURES.

CLINICAL LECTURE

ON TWO CASES IN WHICH CEREBRAL SYMPTOMS WERE PRODUCED BY THE USE OF WHITE LEAD AS A COSMETIC.

Delivered December 17, 1873.

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AT my last clinic I brought before you a patient who had been poisoned by using white lead as a cosmetic, and referred briefly to another patient in my wards in whom I believed certain symptoms, at that time of little severity, were due to the same cause. The latter has since died, presenting, before her death, well-marked cerebral symptoms; and I propose, therefore, to occupy a part of the hour this morning with some remarks on the graver forms of lead-poisoning, so well illustrated by these two cases.

Case I.—E. R., æt. 21, born in England, single, and of irregular habits, was admitted into the women's medical ward of the Pennsylvania Hospital, November 18, 1873. The following history was obtained from the patient shortly after her admission. The patient is free from any known hereditary taint. Her mother is subject to attacks of hæmoptysis, but her father and several brothers and sisters are in good health. She states that when sixteen years of age she contracted a chancre, which was followed in due time by a cutaneous eruption, probably roseola, by sore throat, and by ulcers on the outer and lower third of both thighs and in both popliteal spaces. She was laid up with these for eighteen months, and during that period suffered from amenorrhœa and profound anæmia. During last winter she had an attack of subacute rheumatism, accompanied by swelling of the joints, and last summer was taken with spitting of blood, for which she was admitted into the hospital by my colleague Dr. John F. Meigs. She appears to have been at that time anæmic, and to have suffered from dysmenorrhœa and obstinate constipation, but during her stay here had no hemorrhage from the lungs. She tells us that her bowels are often not moved for several days in succession, and that she occasionally has colicky pains in the abdomen. It is found, on questioning her, that she has been in the habit of applying a powder to her face as a cosmetic. For some time past she has been an almost constant sufferer from frontal headache. Three or four weeks ago she observed that her eyes were drawn inwardly, and that her eyesight was growing dim. She has had marked dizziness and double vision. She has never had a convulsion, and has never lost consciousness.

On admission, the patient is extremely weak, very anæmic, and when she talks or moves hand or foot muscular tremblings are observed. The right pupil is larger than the left, the latter being about normal in size. There is marked dimness of vision, and internal strabismus on both sides; there is no paralysis of any other of the muscles of the eye than the external rectus,

and none of any of the muscles of the face. The grip of the left hand is feebler than that of the right, and she thinks that there is some loss of power in the left leg, although this is not very evident. Sensation is unimpaired. She complains of pain in the forehead and in the vertex, and occasionally in the lower occipital region. A well-marked blue line is seen on the gums just above the insertion of the teeth. The tongue is pale, the appetite poor, the stomach occasionally irritable, and the bowels continue costive; the chest is healthy; the menses are regular. When the patient rises or turns in bed she becomes giddy, and in consequence she is unable to stand without assistance. The veins of the forehead are turgid with blood. An ophthalmoscopic examination shows the existence of marked optic neuritis in both eyes. The urine is acid and is loaded with urates, but contains no lead, no sugar, and no albumen. It has a specific gravity of 1020. She was ordered ten grains of the iodide of potassium three times daily.

A little of the powder which she had been in the habit of applying to her face was obtained from her and analyzed by Mr. Hecker, the apothecary of the hospital, who found it to be pure white lead.

November 28.—The patient had an attack of vomiting last night, during which she threw up a large quantity of a greenish liquid. This morning she is pale and much prostrated; there is general muscular soreness and slight fever, and some pain in the hepatic region. Pulse 100. R Potassæ citratis, gr. x; Tr. opii deodoratæ, gtt. iii, q. t. h. The iodide of potassium to be suspended for the present.

November 29.—Better again.

November 30.—Slightly delirious last night. The frontal headache persists, but is not so intense as formerly. The fever-mixture ordered on the 28th to be stopped; the iodide to be renewed.

December 1.—Delusions and emotional disturbances to-day: for instance, the patient asserts that she was forced to sleep in the stable last night. A sixteenth of a grain of the bichloride of mercury was added to each dose of the iodide.

December 3.—Is much better to-day, and is able to be out of bed and to walk a little.

December 8.—The improvement noted on the 3d continues. The muscular tremblings are less decided. The frontal headache is less severe, and now only troublesome at night. The dizziness has almost entirely disappeared, and the squint, although still present, is scarcely noticeable. Temperature, A.M., 97½°; P.M., 98°.

December 9.—Temperature, A.M., 97°; P.M., 98°. Basham's mixture, in tablespoonful doses, to be repeated every three hours, was ordered to-day. She has been taking six grains of quinia daily since the 6th.

An ophthalmoscopic examination showed the continuance of optic neuritis, the inflammation involving a narrow zone of the retina immediately surrounding the disk. In the right eye the remainder of the retina was quite healthy. In the left eye the inflammatory changes had extended towards, and to a slight extent involved, the macula. A number of small, brightly reflecting spots were seen arranged in rows, producing an appearance which has been compared by Soelberg Wells to that presented by a cluster of spider's eggs.

Case II.—M. C., æt. 23, native of Ireland, a copyist by occupation, was admitted into the women's medical ward of the Pennsylvania Hospital, December 2, 1873. The patient is of healthy parentage, and states that she has herself always had good health until two months ago, when she began to suffer from headache, general weakness, and loss of appetite. She did not, however, take to her bed until two weeks before her admission,

*The notes of this and the following case were taken by my clinical clerk, Dr. George S. Gerhard.

when she was seized with violent gastric pain, nausea, and vomiting, her bowels being confined. She continued to suffer from such attacks until she sought relief in the hospital.

On admission, the patient presents a very anæmic appearance. The conjunctivæ are slightly yellowish, her tongue is furred, and her bowels are constipated, although not obstinately so. There is a faint but well-defined blue line on the gums, and it is found, on questioning her, that she has been in the habit for years past of applying a cosmetic powder to her face. A box of powder which she has with her is found on examination to be composed of inert substances, but she says that she has not always bought the same powder, and she may, therefore, have occasionally used one containing lead. There is a good deal of general muscular soreness, but no evidence of loss of power in any part of the body. The urine is acid, has a specific gravity of 1020, and contains neither albumen nor any other abnormal constituents.

December 3.—The patient had a violent paroxysm of gastric pain last night, accompanied by nausea and vomiting. She was ordered ten grains of iodide of potassium three times a day.

December 6.—In spite of the patient's denial that she had ever used lead knowingly, we find through one of her friends that she has been in the habit, for some time past, of mixing white lead with water and applying it to her neck and shoulders.

December 9.—There is some improvement in her condition to-day; the vomiting taking place generally only early in the morning, immediately after rising, and very rarely after eating. She has little or no pain at present in the region of the stomach. She complains, however, of pain in the inter-scapular region, and along the course of the musculo-spiral and radial nerves of both sides. There is no tendency to wrist-drop, and none to colic. The bowels are moved daily.

December 11.—The patient is to take, hereafter, five grains of citrate of iron with each dose of the potassium. She has very much improved in appearance; the conjunctivæ are less yellow.

December 13.—An epileptiform convulsion occurred last night at 10.15 o'clock, lasting, it is said, about five minutes, but it was not timed by the clock. During this convulsion the patient foamed at the mouth and moved both her hands and her feet, but one side was more convulsed than the other. She had a second convulsion half an hour later, a third at 3 A.M., and a fourth at 7 A.M., all of them being of the same character as the first, and lasting about the same length of time. She was apparently unconscious both during and for a short time after the attacks. This morning she is very restless, and is constantly crying out. She is entirely free from fever and flushing of the face. Her pulse is 98. Her pupils are of equal size, somewhat dilated, but contract under a bright light. Her tongue is moist. A turpentine injection was ordered, and cold affusion to the head. The iodide of potassium to be continued.

December 14.—Another convulsion occurred yesterday afternoon at 2 o'clock, since which time the patient has been so restless and so noisy that it was necessary to tie her in bed and to place her in a room by herself. This morning she has some heat of skin, and a dry and somewhat brownish tongue. Her pulse is 80. The right pupil is larger than the left. Neither pupil responds very promptly to the light. She frequently cries out, and complains of pain at the nape of the neck, which is slightly rigid. The head is somewhat retracted. She is able to swallow milk and beef-tea, which have been freely administered to her since yesterday, and have been retained. The bowels were moved yesterday by the turpentine injection. A hypodermic injection of a twelfth of a grain of sulphate of morphia

last night, followed by a two-grain opium suppository, failed to induce sleep.

An ophthalmoscopic examination of the right eye, made by Dr. W. F. Norris, shows the presence of optic neuritis in a marked degree. The patient's sister, who was seen to-day, states that she (the patient) has never complained of dimness of vision or of vertigo, and, excepting queer muscular movements when she was excited, and infrequent attacks of headache during the last half-year, she always appeared to be quite well until the beginning of the troubles for which she was admitted. The sister has a specimen of the preparation which the patient has been applying to her neck and face, but says it is useless to examine it, for it was bought for white lead and was so marked by the apothecary who sold it.

December 15.—The patient had a convulsion at 7 o'clock last evening, and another three hours later, during which she died.

It is said that while in the last two convulsions she moved her arms freely, but her lower extremities appeared to be paralyzed.

Autopsy, thirteen hours after death. The body was well nourished. Rigor mortis pronounced. Hypostatic congestion of dependent portions of the body unusually well marked. The calvarium was rather thick, but free from any disease. The veins and sinuses of the dura mater were turgid with a very fluid and dark-colored blood. The cerebral membranes were perfectly healthy. The brain, which was carefully examined at my request by my colleague Dr. Hunt, was exceedingly anæmic, the gray matter presenting rather a yellowish appearance, but there was no evidence of disease of any kind. The spinal veins were also engorged, and there was a marked increase in the amount of spinal fluid. The thoracic and abdominal viscera were all examined and found to be congested, but otherwise were in a normal condition, except the ovaries, in which cystic degeneration had commenced.

The posterior part of both the eyeballs was removed and sent to Dr. Norris for minute examination. Some prominence of the optic disks could be detected by the unassisted eye.

Since the autopsy, the following hurried note has been received from Dr. Norris with reference to his ophthalmoscopic examination: "The right eye of M. C. was very similar in appearance to that figured by Mr. J. Hutchinson (see *Ophthalmic Hospital Reports*, February, 1871) in Fig. 1: viz., outlines hazy; color bluish white and opaque; sclerotic ring not visible; vessels very much diminished in calibre; no choroid changes."

I will now read the notes of a third case, in which the symptoms of lead-poisoning are less severe, but in which it has been caused in the same way.

Case III.—M. K., æt. 18, born in America, an umbrella-maker by occupation, was admitted into the medical ward of the Pennsylvania Hospital, October 7, 1873. She is free from any hereditary taint, and until the beginning of her present trouble always had good health. About four weeks before admission she observed that her hands trembled when raised, and soon afterwards that she was unable to extend them fully. She states that for six months previous to the appearance of these symptoms she had been in the habit of applying a preparation to her face as a cosmetic, "to take the shine off the skin," which, upon examination, was found to consist mainly of carbonate of lead. She has not suffered from colic, but her bowels have been at times constipated.

On admission, the patient has well-marked wrist-drop,

especially on the right side, and the characteristic blue line of lead-poisoning is observed on the margins of the gums. The extensor muscles of the forearm respond feebly to the faradaic and galvanic currents. The deltoid and biceps of the right side are weaker than the corresponding muscles of the left side. She is anæmic and weak. Her appetite is poor. Her bowels are regularly moved. The urine is normal, and does not contain lead. She was ordered ten grains of iodide of potassium, and a mixture composed of gentian and iron, three times daily, together with galvanization of the affected muscles.

November 1.—Patient improving. Has now slight control over the extensors of the wrist.

November 24.—The extensors continue to grow stronger. The muscles have been faradized daily for some time past, and contract better than they did. The blue line on the gums is now very indistinct.

November 27.—Although the wrist-drop, especially on the right side, is not yet overcome, the patient is now able to use the right hand in writing. Her general condition has also very much improved. In addition to the internal use of iodide of potassium, the fortieth of a grain of sulphate of strychnia is now injected daily over the muscles of the forearm.

I have nothing to say this morning in reference to the third case; the patient has already been before you and formed the subject of a clinical lecture by my colleague Dr. J. F. Meigs, and I would not have brought her down again into the amphitheatre were it not that the lead-poisoning was produced in the three cases in precisely the same way,—i.e., by the use of white lead as a cosmetic. In every instance it had been used for some time before it produced any bad effects,—in the case of E. R. for two years. It is possible, of course, that until very recently it was not absorbed by the skin; it is more probable, I think, that she has been poisoning herself by a slow process, until thorough saturation of the system has at last taken place. Cerebral symptoms, if I may judge from the writings of English and American physicians, are not very frequently met with as the consequence of lead-poisoning either in this country or in Great Britain; they seem to occur with great frequency in France and Germany. Before the two cases the history of which I have just read came under my observation, I had seen but one other case, which was only a short time under my care before it ended fatally, and of which I have preserved no notes. I remember, however, that the patient had epileptic convulsions, and that he was violently delirious; in fact, his delirium was so violent that he had to be restrained. At the time he was under my care the ophthalmoscope was not in general use as an aid in the diagnosis of cerebral disease, and the condition of his eyes was of course not noted either before or after death.

The diagnosis of the first of my cases presented some points of difficulty. The distinct history which we were able to obtain of a syphilitic infection, and of the secondaries which followed this infection, led me at first to the conclusion that the nervous symptoms were dependent upon a specific lesion of the brain,—most probably meningitis,—causing paralysis of the external recti muscles, and that the same diathesis was the cause of the optic neuritis. A closer study of the case has convinced

me that I was wrong. In the first place, the patient does not present a single symptom which lead is not capable of producing, while there are some absent which we should have at least expected in syphilitic disease. Shortly after her admission into our wards her temperature was noted and found to be normal; at least such is the recollection of the nurse, for, unfortunately, the record has been lost. It is most likely that her memory does not mislead her, for had there been any increase we should have continued to use the thermometer. Later in the case the temperature was again observed, and again found normal; and this time, as you have learned from the notes, the observation was recorded. In meningitis, no matter how slight, fever is an almost constant attendant, while on the other hand the gravest cerebral symptoms due to the absorption of lead are not of necessity accompanied by any elevation of the temperature. The delirium, too, which was present on more than one occasion is much more likely to have been caused by the lead than by syphilis; and the same may be said of the muscular tremors. Optic neuritis may, and occasionally does, occur in syphilitic persons, but Mr. Hutchinson and others have shown that it is not infrequently met with in those who work in lead. The only symptom which it was difficult to explain on the supposition that the patient was affected with lead-poisoning was the palsy of the external recti; but the effects of lead manifest themselves in loss of power of other muscles than the extensors of the wrist, and I see no reason why the external recti should not sometimes be the sufferers. In fact, I have recently been told that Mr. Hutchinson has reported cases in which he shows that this has occurred. I need not add that we have other symptoms than those I have been just pointing out which indicate unmistakably the presence of lead-poisoning. The patient denied at first having used lead as a cosmetic, but after the white lead had been found in her pocket she confessed that she had bought it to apply to her face, and had been applying it for at least two years. We have a well-marked blue line on the gums, which still persists, in spite of the treatment by iodide of potassium; and we have a tendency to constipation, which is disappearing under the remedies employed.

The second case is even more interesting than the first. When I saw the patient for the first time she appeared to be suffering from a disease of the stomach, either ulcer or gastralgia; but the discovery of the blue line on the gums the next day satisfied me that I had to do with a case of lead-poisoning. You have heard that she denied having ever knowingly used any preparation containing lead as a cosmetic, but her friends and her sisters were more candid; and there can, therefore, be no doubt that she not only made such a use of white lead, but that she also applied it very freely to the surface of the upper part of her body. For a few days she seemed to do well under the treatment adopted. The paroxysms of pain became rarer and less severe, the vomiting occurred less frequently, generally in the morning, and only occasionally after eating, and she apparently gained

strength. The anæmia, notwithstanding the administration of iron, remained, however, as marked as ever, and the same was true of the muscular soreness.

I was unprepared for the grave change in her condition which I found at my morning visit to the hospital on the 13th. Although fully aware that the symptoms then present might be due to the lead-poisoning, I confess that I had some difficulty in regarding them as anything else than the manifestation of hysteria, to which they unquestionably bore a decided resemblance. It was difficult to look upon them as expressions of serious cerebral trouble, because there was neither heat of surface nor acceleration of the pulse,—which does not of course exclude lead-poisoning,—and because she had given on one or two occasions some evidence that she was of an hysterical temperament. The character of the convulsions appeared, however, to be distinctly epileptiform, with loss of consciousness and foaming at the mouth. In addition to the iodide of potassium, which I directed should be continued, her treatment consisted of a turpentine injection, and cold affusions to the head. Later in the day the resident found it necessary to administer hypodermically a quarter of a grain of morphia and an opium suppository, in order to quiet the excessive restlessness. I saw the patient again the next morning, and learned that she had had another convulsion similar in character to those that preceded it. Her symptoms also indicated that her condition was a more serious one than it had seemed to me the day before. Her pulse was much weaker, and her tongue was heavily furred with a thick whitish coating. She also complained of pain in the nucha, and there was some slight retraction of the head; but I was then, and am still, inclined to believe that she opposed some resistance to my attempt to bend her head forwards. If any doubt had been left as to the serious nature of the case, it would have been dispelled by the results of the ophthalmoscopic examination, which showed the presence of optic neuritis,—a disease which, I repeat, it is now well known occurs as a consequence of lead-poisoning, and the existence of which was fully proven at the post-mortem examination. The results of the autopsy were in other respects confirmatory of the correctness of the view I held. No lesion of the solids of the body was detected which could reasonably be supposed capable of causing death. Congestion of several of the organs, and engorgement of the meningeal vessels both spinal and cerebral, were found, it is true, but these I am disposed to look upon as consequences of the fluid condition to which the blood had been reduced by the prolonged action of lead. In order that the examination of the brain might be made by one who had no preconceived opinion to maintain as to the nature of the disease, I requested my colleague Dr. Hunt to make it. Having done so, he pronounced the brain to be perfectly healthy in all respects, save, of course, that it was anæmic and that there was discoloration of the gray matter,—a condition which is said by Valleix* to be not infre-

quently met with in the brains of those who die of lead-poisoning. With the object of leaving nothing undone that may throw light on this interesting case, I have sent portions of the brain, liver, and kidney to Dr. H. B. Hare, the pathological chemist to the hospital, in order that they may be examined for lead; and I will report to you at some future time the result of his investigation. The effusion which was found beneath the spinal membranes probably took place not long before death, since during the last convulsion the legs were not moved, which was not the case during the previous convulsions; and there was no loss of power observed at the morning visit.

The three cases are further of interest because they illustrate the fact that the same poison may and does frequently produce very different effects in different people. You are aware how various are the forms which constitutional syphilis is capable of assuming; and the same is true to a certain extent of lead-poisoning. The girl with wrist-drop has been under observation for more than three months, and during that time has never suffered from constipation or colic, and has at no time presented evidences of nervous derangement. But the same cause has lighted up in the two other cases a train of cerebral symptoms which has terminated in one case in death, and in the other will certainly leave behind it a decided impairment of vision. The sudden and unexpected supervention of delirium and convulsions upon colic and constipation, which occurred in the former, has, of course, been observed before. It took place in the case which was under my care some years ago, giving rise to the impression that the patient had been drinking, and leading to his arrest.

The cerebral symptoms in lead-poisoning may assume various forms. In some instances the progress of the disease is slow, and the periods of delirium may alternate with intervals of entire consciousness. This was seen in our first patient, who could be said to have been "out of her head" only on two or three occasions. This is not a dangerous form, and generally ends in recovery. In others, as in the case of M. C., convulsions occur with great frequency, and are followed by delirium or coma. In still another form, coma is the only indication of grave trouble. Of all these forms, the convulsive is said to be the most serious.†

The ophthalmoscopic examinations were, I need not say, of great service to us in arriving at a correct conclusion in the first case, and in the second they placed beyond doubt the existence of more than a merely hysterical condition. In making them I have had the advantage of the assistance of Drs. George C. Harlan and W. F. Norris, both of Wills Ophthalmic Hospital. The occurrence of amaurosis in lead-poisoning had not escaped the observation of our predecessors in the healing art, but before the introduction of the ophthalmoscope

† Cerebral symptoms dependent upon lead-poisoning are well described by the following authors: Valleix, *loc. cit.*; Th. and A. Husemann, *Handbuch der Toxicologie*; Jaccoud, *Clinique Médicale*; Stille, *Therapeutics and Materia Medica*; Tanquerel; Brockmann, *Die metallurgischen Krankheiten des Oberharzes*; Wunderlich, *Pathologie*.

* *Guide du Médecin Praticien*, vol. v.

it was impossible to say whether this depended upon simply a loss of the power of accommodation or upon optic neuritis. We are now in a position to make this distinction; and this is a gain of no little importance, inasmuch as the existence of the latter may be assumed to indicate that the system is more fully under the effects of lead than when the former alone is detected. We are, moreover, not to limit our examination to those cases in which complaint is made of a defect of vision, for the inflammation may produce marked changes within the interior of the eye without the patient or her friends being aware of its presence, as in the case of M. C., who always when questioned on the subject answered that she saw perfectly.*

Pathologists have of course explained in different ways the mode in which lead-poisoning gives rise to cerebral symptoms. By some it is thought that they are due to the direct irritation of the lead, but to me it appears much more probable that they are largely owing to the anæmic condition of the nervous centres which is generally present, and which certainly did exist in a marked degree in the fatal case reported by me, in which there was scarcely a symptom present which could not be referred to this cause, and in which there was, judging from the remarkably fluid condition of the blood after death, a deficiency of fibrin as well as of the blood-corpuscles.

It still remains for me to speak of the treatment. In the first case, the use of the iodide of potassium in large doses, combined latterly with iron, has been of decided benefit to the patient. You recollect the condition in which she was first brought before you, carried upon a stretcher; to-day she is able to walk down-stairs unassisted. The internal squint has gone, and she has gained strength and flesh. Unfortunately, I cannot add that the optic neuritis has subsided; it is apparently beyond the influence of remedies. The small quantity of bichloride of mercury which was added to the iodide not long after her admission was prescribed under the idea that there might still be lurking in her system some vestige of the syphilitic poison. The patient has also been taking quinia, and has, I think, been benefited by it.

The same remedies were employed in the second case, and were apparently doing good, when, without warning, a convulsion occurred. Is it possible that any other treatment than that adopted would have saved the patient's life? I think not. Certainly not bleeding or any other depletory measure, for this would have aggravated the anæmia, which was, I believe, the exciting as well as the predisposing cause of the convulsions. These did not seem to be prolonged enough or sufficiently numerous to make it justifiable to have recourse to the inhalation of chloroform; and if a similar case were to present itself to me to-morrow I should treat it in the same way.

I have but a word to add in conclusion, and that is to call your attention to the fact that, in a ward which contains generally about twenty patients, I have had at one time as many as three presenting

symptoms produced by the use of white lead as a cosmetic; and I have good reason to believe that it is sold in large quantities by druggists who know the purpose for which it is bought, although they may be ignorant of the disastrous consequences its use entails. You have had sufficient evidence to-day that its application to the face is far from being harmless; and perhaps some of you may have the power, by making this generally known, to prevent some poor woman from falling a victim to her vanity.

ORIGINAL COMMUNICATIONS.

CURIOSITIES OF COUGH.

Reported to the Medical Library and Journal Association, December 12, 1873.

BY L. ELSBERG, M.D.,

Professor of Laryngoscopy and Diseases of the Throat in the University of New York.

IF, as is often said, the medical specialist be in danger, on account of the limits of his practice, of becoming one-sided and prejudiced, he enjoys as a corrective the advantage of seeing, more frequently than general practitioners, rare and difficult cases, which teach him the relation and interconnection of diseases of different organs, and of local and general affections. Some years ago, in an essay which I had the honor of reading before this association, I pointed out some curious instances of the connection of throat-diseases with various other derangements of health; this evening I desire to call your attention to some cases of unusual cough which have fallen under my observation during the last twelve months.

I have seen three cases of what I cannot better characterize than as a "dog-cough."

I.—J. S. B., a healthy-looking boy, born and brought up in the country, æt. 15 years, reported to have had some trouble in his throat for several years, came to my office about a year ago, making at irregular intervals a loud barking noise, not distinguishable from the barking of a large ordinary dog. The intervals of quiet lasted from only a few minutes to half an hour. His mother said that this peculiar cough had existed for three or four months, and that previously he had had an ordinary cough for a couple of years, which gradually developed into this bark. He had continually been under medical treatment, with, however, only occasional and temporary benefit; the bark had never been influenced by any medicine, but had become worse—i.e., more frequent—during the last few weeks. The boy's general health seemed unaffected; his respiration, appetite, digestion, evacuations, sleep, etc., were normal; he sometimes, though not frequently, barked during the night, but this did not always awaken him. I found enlarged tonsils, some pharyngitis, and localized inflammation of the upper aperture of the larynx,—i.e., of the free border of the epiglottis, the ary-epiglottic folds, the mucous membrane covering the cartilages of Santorini, and the upper portion of the arytenoid cartilages; just around the upper laryngeal aperture there struck me as being a circumscribed, livid discoloration.

The other two cases resembled this one in the peculiarity of the loud, dog-bark cough; the anatomico-pathological condition, however, was differ-

* Since this lecture was delivered, Dr. Norris has examined sections of the optic nerve, and tells me there is abundant evidence of the existence of inflammation under the microscope.

ent. In neither were the tonsils enlarged or pharyngitis present, but in both the epiglottis and the immediate neighborhood of the entrance into the larynx were more or less affected. In one, a little boy of ten years, there was principally inflammation and swelling of the ary-epiglottic folds; and in the other, a young lady of nineteen, there were, in addition, superficial ulcers like pins' heads on the upper edge of the epiglottis, especially at the angle of junction of the ary-epiglottic folds.

In all three cases the character of the cough was so marked that persons who heard it without knowing its source mistook it again and again for the barking of a dog. I would add that the barking was like the healthy dog-voice; I have known more than once dogs to be suffering from a cough resembling in sound an ordinary human cough, but what these three patients had sounded just like the ordinary dog-bark. All three were cured by local treatment, in conjunction with attention to the general health.

II.—February 14, 1873, Mrs. E. M., of New Haven, æt. 31 years; has generally enjoyed good health until three months ago. Since then, she suffers from frequent paroxysms, consisting of a peculiar hacking cough, combined with retching and straining positively distressing to listen to. The cough itself is indescribable; she does not vomit, but strains so hard as to make one sick to witness it. This continues until she coughs up a little phlegm and matter. She also complains of some pain on the left side, just back of the larynx. On laryngoscopic examination, I found that the left pyriform sinus contained some purulent matter and something dark, and discovered at the bottom two ulcers. When I announced what I saw to the patient, she turned to her husband and said, "There, didn't I always tell you so?" She then told me what she had purposely omitted to relate before,—viz., that her trouble commenced after swallowing some black thread which she had bitten off in sewing, three or four months previously. It remained there ever since, in spite of the terrible attacks of coughing and retching to get it up; but was now easily removed. She had taken all sorts of medicine without benefit; the whole fauces and pharynx were sore and inflamed from the straining and tearing; sometimes she would get up phlegm streaked with blood from the violent efforts. She was exceedingly nervous, and the general health was affected both by her disease and the medicine she had taken.

More than ten years ago I communicated to the Academy of Medicine some observations on diseases of the pyriform sinus, and among them the following case of follicular ulceration:

Louis D., a native of Germany, aged 17 years, working as a tinsmith, after exposure a year and a half before I saw him "caught a severe cold and cough." He had taken all sorts of cough-mixtures, domestic and from doctors, regular and irregular; had been to the German Dispensary, the College of Physicians and Surgeons, etc., etc. Since six weeks the cough had become *truly terrible*,—a ceaseless hacking night and day. When the lad came to me he presented the obvious signs of a rapid consumption; he was extremely weak and emaciated, with a pulse varying from 120 to 130, hectic flush on cheeks, and cold extremities. He could obtain but little sleep, and had also night-sweats; but over-weighing all else was the cough,—constant, irritating, hacking, severe beyond description."*

* See Essay on the Topical Medication of the Larynx and Neighboring

Since then I have repeatedly found a cough of the utmost severity depend upon disease of the pyriform sinus.

(To be continued.)

MYELOGENIC LEUKÆMIA.

BY H. C. HAND, M.D.

BEING more than ordinarily interested in researches on the development of the blood in the red marrow of bones,—having, indeed, myself published some observations on the subject (*Philadelphia Medical Times*, vol. ii. p. 164),—I was greatly pleased to meet the translation by William Ashbridge, M.D., in the *Times*, vol. iv. p. 102. In the case of Professor F. Mosler, there detailed, we have both the *ante-* and *post-mortem* history of a patient with myelogenous leukæmia.

I desire to call attention to the history of a case which has already been published in the *Northwestern Medical and Surgical Journal* in a series of cases of organic heart-disease, but which possesses far greater interest in this connection.

Bridget McGuire, æt. 70; single; temperate; native of Ireland; in giving her family history states that her mother died of old age, her father, at the age of sixty years, of dropsy with cough, and that one sister died at sixty, after but one week's illness, of hæmoptysis, spitting a great deal of clotted blood every day from her seizure to death. The patient came from Ireland in 1809, since which time she has earned her living by light sewing and lace-weaving, always being careful to preserve good health. She has been delicate from girlhood, and has suffered from palpitation of the heart. When forty-four years old she had some affection of the lungs, which confined her to bed two months. From this she recovered her usual health, and retained it for a number of years.

At the age of fifty-one she was treated by Dr. Mitchell for *heart-disease*, having had quite profuse hæmoptysis, caused by heavy lifting, and suffering from debility, palpitation, and a violent pain in the region of the heart, with tenderness on pressure. Recovery took place from this attack, but she was left subject to occasional exacerbations of a similar character. At the age of fifty-eight her feet swelled; after three weeks the swelling subsided; but from that time onwards she has often had a slight effusion of serum in the feet and legs.

About Christmas, 1869, she commenced to be short of breath, and to suffer greatly from eructations, both day and night, of clear, tasteless water.

October 10, 1870, she was admitted to the Philadelphia Hospital, complaining of dyspnœa, slight, dry cough, a "sore pain at heart," and œdema of the feet.

October 14.—Note made that the expression of the face is intelligent, but anxious. The position assumed is a sitting one in the bed, the recumbent position being impossible. Her complexion is sallow; the lips and extremities bluish; the conjunctivæ dingy. The muscular and adipose tissues are not greatly wasted. The skin is soft and flexible, but cool. The feet and legs are œdematous. She occasionally has slight dizziness; never any headache. The sight and hearing are good. Sleep for the last two months has been impossible in the recumbent posture, and disturbed by smothering sensations even when sitting up. The tongue is of a

Organs under Sight. Transactions of the New York Academy of Medicine, vol. ii. part xii. p. 436.

purplish hue. The appetite very poor, and a gripping pain is felt in the course of the œsophagus during deglutition. Abdomen tympanitic. Neither spleen nor liver enlarged. Bowels inclined to constipation.

She has some cough, but no expectoration; says that four years ago she had a severe stitch in the upper side of the chest, the doctor attending calling it pleurisy. The right clavicle is excessively prominent; the percussion-note under it is dull, the respiration harsh. Left side, anteriorly, percussion clear, respiratory murmur feeble, expiration prolonged. Posteriorly, the right side of the chest is much more prominent than the left, while its percussion-note is unduly resonant, and respiration feeble. The left side is dull on percussion; respiration bronchial, with bronchial resonance of voice. Submucous and subcrepitan râles are heard in all parts of the chest.

Heart, no pain at present; impulse normal; movements regular. Its space of dullness extends from the third intercostal space to the base of chest, and from the left edge of the sternum two inches outwards. There is no murmur. Pulse 100, feeble. The veins at the base of the neck are engorged, and pulsate. There is no pain nor tenderness about the kidneys. Urine, specific gravity 1016; no albumen; normal in color and quantity. No pain nor swelling of joints.

October 18.—In the morning she appeared nearly as well as usual, sitting up in bed, but looking somewhat exhausted, and complaining of pain in the legs and a sense of distress about the heart. Very soon after, she died by syncope.

Autopsy twenty-four hours after death.

Sternum.—First and second pieces movable on each other, as are also the third and fourth. Thick, bloody pus exudes when the periosteum is punctured near the movable portions. The cancellated tissue is softened so that the anterior and posterior compact layers can be approximated by pressure.

Lungs.—There are pleuritic adhesions on each side, confining a considerable quantity of straw-colored serum at right apex, at each base, and smaller quantities elsewhere over posterior lobes; the whole amount in each pleural cavity is about one pint.

The pulmonary tissue is emphysematous, except that at the base of the lungs where bathed by the pleuritic effusion, which is dark-colored, it has the appearance of flesh, and sinks readily in water. The whole of both posterior lobes, in fact, floats very low in water, is congested and firm. The bronchial tubes of congested portions contain muco-pus.

Pericardium.—Some old flakes of lymph on cardiac portion.

Heart.—Weight twelve and a half ounces. Cavities enlarged; walls firm, and of nearly normal thickness; valves all water-tight except the tricuspid, which leaks a little. Slight atheroma about the attachments of aortic valves. Right side of heart full of liquid blood, and some soft, dark clots. Left side empty. The blood in the veins is liquid.

Microscopical Characters.—The muscular fibres of the walls of the left ventricle are in an advanced stage of fatty degeneration, being filled with granules soluble in ether, and the striæ of many of the fibres being nearly obliterated. The fibres of the walls of the right ventricle are for the most part free from granules, having only small patches scattered here and there; the striæ are distinctly visible.

The Peritoneal Cavity contains one pint of straw-colored serum.

Liver.—Weight thirty-nine ounces. It is gorged with liquid blood, and is finely mottled with red and yellow. There is a broad (two and a half inches) depression on the upper surface of the right lobe, running from behind forward; the capsule covering this portion is

white, and thickened; a dilated branch of the portal vein (three lines in diameter) runs just beneath. The hepatic tissue contains one or two calcareous nodules the size of a cherry-stone.

Spleen.—Weight twelve ounces; firm; trabeculæ prominent on section; capsule thickened, and covered by small flakes of lymph.

Kidneys.—Left, about normal size. Right, weight three and a quarter ounces; its capsule thickened and adherent so as to tear off some renal tissue when removed, leaving the surface rough and granular, and exposing small cysts. Section, dark in color; the cortical portion is scarcely a line deep.

Here, then, was a patient who, as I distinctly recollect her, was suffering with general debility, a feeble circulation, and profound anæmia; and at the post-mortem examination of her body a substance resembling pus oozed out from the cancellated tissue of the sternum. If on one hand it is to be regretted that no examination was made of the marrow of other bones, and no microscopical examination of the blood or of the puruloid liquid from the sternum, on the other hand there is the advantage that the notes were taken (October, 1870) before Neumann's researches had attracted any attention, and consequently at a time when there was no theory to be upheld. The anæmia seen to exist during life and the liquidity of the blood found after death justify the conclusion that the patient was in a leucocythæmic condition. The absence of those lesions of the spleen, liver, and lymphatic glands which usually accompany leucocythæmia, and the unmistakably abnormal character of the marrow of the sternum, together give strong evidence that to a vice of her blood-making marrow she owed the condition of her blood.

Nor is this the only case in which I have seen a like condition exist, although it is the only one of which I have notes. At autopsies of anæmic and emaciated subjects in the dead-room of the Philadelphia Hospital I have not infrequently (I would certainly be within bounds should I say six times) seen the same purulent liquid issue from the broken sternum. More than almost any other condition I have ever seen in the cadaver, it has puzzled me to explain. Not even when studying the changes occurring in the marrow, preparatory to the publication of the article already mentioned, did the condition of the sternum and the general condition of those patients become associated in my mind. Never, in fact, until reading the translation of the report of Professor Mosler's case, did the full solution of the problem fall upon me.

ST. PAUL, MINN., December 6, 1873.

HYPogastric LITHOTOMY (*The Lancet*, December 6, 1873).—Supra-pubic lithotomy has, in certain cases, a decided advantage over the lateral operation. Mr. Sampson Gamgee reports the case of a little girl, æt. 9, pale, puny, and with a very narrow pelvic outlet, who had long suffered from the presence of a large calculus in her bladder. The size and fixity of the stone, together with the smallness of the outlet, induced him to operate by the hypogastric method. The calculus was extracted, and the wound healed directly. There was no constitutional disturbance, and the patient was discharged, cured, on the fourteenth day.

NOTES OF HOSPITAL PRACTICE.

BELLEVUE HOSPITAL, NEW YORK.

SURGICAL CLINIC OF PROF. JAMES R. WOOD.

LIGATION OF THE FEMORAL ARTERY FOR POPLITEAL ANEURISM.

RICHARD C. (colored), æt. 35; male; U. S.; cook; admitted December 15, 1873. The patient gives a good family history; has rarely been ill himself. He has had gonorrhœa several times, however, and has had sores on his penis, but no secondary symptoms. He has been a hard drinker for years. Nine years ago he had an aneurism of the right popliteal artery. Pressure was tried in vain. The femoral artery was then ligated in Scarpa's space, and the patient made a complete recovery, the ligature coming away on the thirteenth day.

Two years ago the patient noticed a pulsation in the left popliteal space. This continued for six months; and then a tumor appeared of the size of a walnut, which gave him neither pain nor inconvenience. He went about his work, paying no attention to the doctors, who told him he had an aneurism. Meantime the tumor increased in size, and about seven months ago it began to give him pain and to swell. The swelling soon extended from the knee to the ankle. The pain and swelling would disappear after the leg had been bathed, rubbed, and bandaged, while the original tumor and pulsation remained undiminished. Still the patient kept at work until two months ago, when the pain and swelling had become so great that he was obliged to go to bed. The swelling increased, and the skin which covered it became so tense that he feared it would burst. At this juncture he was admitted to the hospital. On admission, the patient is a strong, healthy-looking man. He is suffering considerable pain, and can sleep but little in consequence. The left foot, leg, and lower third of the thigh are markedly œdematous, and the integuments are tense and shining. A tumor is found occupying the whole popliteal space and the lower third of the inner side of the thigh. Distinct pulsation can be seen as well as felt in this tumor. The pulsation is expansive, and synchronous with the radial pulse. No thrill can be felt, but a murmur, synchronous with the radial pulse, is heard over the whole surface of the tumor, loudest at the lower portion of the popliteal space. A blowing sound is heard also over the femoral artery above the situation of the tumor. When pressure is made on the artery above the tumor the pulsation and murmur cease, but the size of the tumor remains unaltered. On removing the pressure the pulsation and bruit return.

On making deep pressure over the artery, just above the tumor, the artery may be felt rolling under the finger like a somewhat stiff tube. The following are some of the measurements of the lower extremities:

	Right. Inches.	Left. Inches.
Thigh just above the tumor	14½	19
Thigh midway between the knee and the upper limit of the tumor	13½	22½
Leg over tubercle of the tibia and lower portion of popliteal space	12	20½
Knee over middle of patella and middle of popliteal space	14½	24½
Calf, upper portion	12½	18½
" middle "	12½	17½
" lower "	9	15
Ankle	7½	11
Around point of heel and across instep	12½	15½
Around arch of foot and across instep	10	12½

On the day of admission the whole limb was wrapped in cotton batting, and eight pounds six and one-half ounces of shot were placed over the femoral artery. A tourniquet was also buckled loosely around the thigh, to provide against accident.

December 16, A.M.—Bowels have moved four times since admission. Patient slept but little during the night.

December 17, A.M., pulse 104; resp. 22; temp. 99°
 P.M., " 112 " 22 " 100½°
 " 18, A.M., " 100 " 20 " 99°
 P.M., " 108 " 27 " 100°
 " 19, A.M., " 120 " 28 " 100½°

Patient has quite a brisk diarrhœa. Ordered bismuth subnit., gr. x, after each passage.

December 19, P.M., pulse 116; resp. 29; temp. 101½°
 " 20, A.M., " 112 " 24 " 99½°

Patient slept well last night; has no diarrhœa.

A consultation was held at noon of the above date, and ligation of the femoral artery was decided on. Professor Wood did the operation in the presence of the class. The artery was exposed without difficulty, and ligated four, and one-half inches from Poupart's ligament. The edges of the wound were brought together by means of wire sutures, reinforced with adhesive straps. The whole limb was enveloped in cotton batting. Evidences of incipient aneurism of the arch of the aorta, as well as of fatty degeneration of the heart, had been discovered before the operation, and for these reasons the patient took no anæsthetic. He bore the operation, which lasted ten minutes, without flinching.

"At the consultation," said Professor Wood, "the question was of course between ligation of the femoral artery and amputation of the thigh. In the operation we have performed, the dangers to be apprehended are principally three: first, secondary hemorrhage at the time of the separation of the ligature; second, gangrene of the leg from inadequacy of the collateral circulation; third, sloughing of the sac.

"With regard to the first danger, the atheromatous condition of the artery renders it by no means insignificant; but it would have been no less, and not more easily overcome, had we amputated.

"With regard to the danger of gangrene of the leg, I think it is small; for the growth of the aneurism has been sufficiently slow to admit of the establishment of a collateral supply of blood to the parts below it, amply sufficient for their nourishment. Sloughing of the sac I consider to be the chief danger. In that event we should not wish we had amputated, for the patient might yet recover without amputation. More likely, however, we should be obliged to amputate. I have amputated in such a case with success. With such good prospects for success in this case, I consider ligation far less hazardous than amputation. Should the leg die or the sac slough, we still have left two-thirds of the thigh sound, and we may amputate then with almost as good chances of success as now. I believe we have given the man the best chance possible of saving his life as well as his limb."

After-History of the Case.—December 20, 1873, 3 P.M.—Patient has some pain in the tumor, and in the thigh and leg. Ordered McMunn's Elixir, ℥xl. 4 P.M., pulse 116; respiration 30; temperature 98½°.

December 21, 9 A.M.—Pulse 124; respiration 30; temperature 102½°. Patient feels much more comfortable, but still has some pain in the knee. 8 P.M.—Pulse 120; respiration 24; temperature 101½°. Patient has not slept since the operation. Ordered McMunn, ℥xxx. Midnight.—Patient still awake. Ordered McMunn, ℥xx.

December 22, A.M., pulse 114; resp. 24; temp. 101°
 P.M., " 124 " 25 " 102°

December 23, A.M., pulse 114; resp. 25; temp. 101°
Slight discharge of pus from the wound.

December 23, P.M., pulse 114; resp. 24; temp. 101°
" 24, A.M., " 108 " 23 " 100°

Patient has no pain; appetite excellent; bowels slightly constipated; some flatus; ordered enema of assafœtida. The integuments covering the tumor, leg, and foot are becoming wrinkled.

Measurements.

	Inches.
Thigh just above the tumor	19½
Midway between knee and most superior portion of the tumor	23
Over tubercle of tibia and most inferior portion of popliteal space	17½
Knee over middle of patella and middle of popliteal space	24½
Calf, upper portion	17½
" middle "	17½
" lower "	14½
Ankle	11
Around point of heel and across the instep	14½
Around arch of foot and across the instep	12½

December 24, P.M.—Pulse 112; respiration 32; temperature 100½°.

December 25, A.M.—Pulse 112; respiration 30; temperature 100½°. Small amount of pus is discovered in the wound, and one suture is removed; otherwise patient is doing well.

December 25, P.M., pulse 120; resp. 20; temp. 100½°
" 26, A.M., " 116 " 30 " 100½°
P.M., " 120 " 26 " 100½°
" 27, A.M., " 124 " 28 " 100°

Patient is comfortable; has no pain, and sleeps better than at any time since the operation. Appetite good.

December 27, P.M., pulse 116; resp. 28; temp. 101½°
" 28, A.M., " 116 " 22 " 98½°

Patient slept well last night. This morning he is very comfortable. The integument over the tumor is wrinkling more and more every day. Tumor gradually decreasing in size. There is still some pulsation in it—not expansile.

1.30 P.M.—Patient while at dinner felt something give way at site of the ligature. On looking down, he saw blood coming from the wound. The house-surgeon was immediately called, but before he arrived patient lost eight ounces of blood. The artery was controlled by digital compression under Poupart's ligament, and by Petit's tourniquet. Patient did not suffer much from shock, but was greatly frightened. Prolabia became pale, and surface cool. Pulse remained quite good. Patient was thirsty; ordered whisky and carbonate of ammonia, also opiates, to keep him quiet. Hot bottles were placed about him.

4 P.M.—Pulse 120; respiration 24; temperature 99½°. Patient is still suffering from fright, but is in good condition.

December 29, 1 A.M.—Involuntary contractions of the quadriceps extensor are noticed. During one of these a hemorrhage happens, patient losing two ounces of blood. Tourniquet is readjusted.

9 A.M.—Pulse 120; respiration 31; temperature 101½°. Patient has been seen every hour during the night, and has not slept at all; still apprehensive of danger. Prolabia pale. Temperature of foot and leg normal.

4 P.M.—Pulse 140; respiration 28; temperature 104°. Patient comfortable.

9.30 P.M.—Surface-temperature high to the touch. Pulse full and rapid. Respiration short and quick. Patient complains of some pain in the epigastrium; is very thirsty. Ordered ice, also tincture of aconite (Fleming's), \mathfrak{M} i every hour until four doses are taken. The

artery has been controlled by digital compression and tourniquet combined, ever since the first hemorrhage occurred, on the 28th inst.

December 30, 1 A.M.—Patient has not rested well to-night. He feels hungry, and takes 3ii of beef-tea. Pulse quite rapid. Surface very warm. Patient suffers no pain.

2 A.M.—Patient has some pain in the leg, and great thirst; otherwise is about the same as at last note. Ordered ice, and McMunn, \mathfrak{W} xxx. Pulsations in the artery are as strong as ever; they are still controlled by digital compression above the tourniquet.

3.30 A.M.—Patient is sound asleep. Respirations sighing. Pulse still rapid, and skin hot. No change in the character of the pulsations of the artery. Patient awoke once after the last note, but relapsed into a somnolent state.

4 A.M.—Patient more comfortable. Skin not so hot. Pulse less rapid. Temperature of leg good. Patient sleeps most of the time, and has subsultus tendinum.

5 A.M.—Compression still kept up by finger and tourniquet.

9.15 A.M.—Pulse 140; respiration 30; temperature 105°. Patient has slept most of the time since the last note. He feels refreshed; is hungry; takes beef-tea. Temperature of leg still good. Digital and tourniquet pressure still kept up.

12.30 P.M.—Small amount of sero-sanguinolent pus, of fetid odor, noticed in the wound. Dupuytren's tourniquet substituted for Petit's. Artery entirely controlled by it, but digital compression still kept up.

4 P.M.—Pulse 150; respiration 28; temperature 104°.

9.30 P.M.—Pulse rapid and feeble. Ordered tincture of aconite (Fleming's), \mathfrak{M} ii every hour for three hours.

December 31, 1 A.M.—Pulse 140. Skin cooler. Patient is slightly delirious. Subsultus tendinum. Ordered quin. sulph., gr. v, q. t. h., and \mathfrak{W} xxx of McMunn's Elixir.

5 A.M.—Patient has grown weaker since last note. Pulse has gradually lost force, and is now very rapid and feeble. Pulsations in external iliac at times cannot be felt. Respirations sighing. Patient is flighty, though easily recalled to himself. Temperature of the leg good. Foot a little cold. Tumor somewhat softer, and skin covering it quite wrinkled.

9 A.M.—Pulse 144; respiration 24; temperature 102°. Patient has slept since last note. He wakes now, and is refreshed; still a little flighty; says he feels well. Pulse fuller, and respirations normal.

1 P.M.—Patient hungry, and eating chicken-soup and oysters. He takes beef-tea and porter through the day.

4 P.M.—Pulse 144; respiration 28; temperature 104°.

9.30 P.M.—Patient has had some nausea, and has vomited. Ordered bismuth. subnit., gr. x; cum cerii oxal., gr. i, to be repeated if nausea should recur. Ordered also milk-punch (milk 3ss with whisky 3i) every half-hour.

January 1, 12.05 A.M.—Patient awake. Pulse rapid and feeble. Respirations normal. Patient has some abdominal tympanitis. Ordered turpentine stupes. Has not slept for some hours. Ordered McMunn's Elixir, \mathfrak{W} xxx. Has vomited two or three times since last note. Ordered bismuth and cerium, as above, after each emesis.

2 A.M.—Patient developed tracheal râles rapidly in the last half-hour, and died.

Autopsy.—January 1, 1874, 2 P.M.—All the organs anæmic. Liver and kidneys slightly fatty.

Heart and Arterial System.—At the base of the aortic valves were some atheromatous changes. On the ascending part of the arch of the aorta, just above the aortic valves, was a large patch of atheroma. All the arteries were atheromatous, the left femoral more so than the right.

The recent ligature had ulcerated partly through the artery. Above the ligature a clot of considerable firmness had formed, three-quarters of an inch in length, tapering to a point above, and filling the calibre of the vessel at the seat of ligature. Below the ligature was a clot one inch in length, less firm than the clot above, and not filling the calibre of the vessel perfectly at any point.

The aneurismal sac was firmly adherent to the bone and to the surrounding soft parts; so that, in order to remove it for examination, and to preserve it, the lower half of the femur and the upper half of the tibia were sawn off together.

The sac, as well as the leg and foot, showed no signs of sloughing. The cavity of the sac would admit a man's fist; it was lined with layers of fibrin, and in the centre were clots of blood and fibrin.

The other side of the body presented objects of greater interest. Here the femoral artery had been tied in Scarpa's space, nine years before, by Dr. Gurdon Buck, for popliteal aneurism. The artery was found to be impervious above the seat of ligature, as far as the origin of the profunda femoris, a distance of two and three-quarter inches. Below the seat of ligature the artery was impervious for a distance of two and one-quarter inches. It then became pervious, and remained so for a distance of five and one-half inches. At a point one and one-half inches above the sac it became again impervious. The sac had dwindled to a fibrous cord, two and one-half inches in length, but little larger than the artery itself, and terminating at the bifurcation of the artery. Below the bifurcation the posterior tibial was impervious as far as the peroneal, a distance of one inch; the anterior tibial was impervious as far as the recurrent branch, a distance of three-quarters of an inch.

F. W. CHAPIN, M.D.

TRANSLATIONS.

THE THEORY OF FATTY HEART.

DR. H. CURSCHMANN, of Berlin, makes (*Deutsches Archiv für Klin. Med.*) the following observations regarding a case of fatty heart which was under his care in February, 1870, at which time he was assistant physician in one of the hospitals of Mayence. The patient was a man aged 32 years, by profession a waiter, and, during the course of the affection which terminated in his death, at various times came under treatment, both in the wards of the hospital and also as an out-patient. His first admission into the hospital was in February, 1870. His previous health, up to 1868, had always been good. His parents were both living, and in good health. From his fourteenth year he had been a waiter, and during the last five years he had been in various hotels along the Rhine, and had been compelled to labor very actively. He had not been addicted at any period of his life to the excessive use of spirituous liquors, but, like all his class, had been very irregular in regard to his meals. He had never had syphilis, and had not indulged to excess in sexual intercourse. For two years he had noticed that his strength was failing, that he grew tired upon slight exertion, and suffered from shortness of breath from going up-stairs; but he still continued at his work until compelled by a severe cough, attributed by him to exposure to cold, and an increase of his above-mentioned sufferings, to seek the hospital. At the time of his admission, February 8, 1870, he complained of great weakness, frequent attacks of palpitation of the heart, and a con-

stant shortness of breath, which at times increased in severity to a marked extent. His cough was frequent and troublesome, but accompanied by slight expectoration. He was compelled by his dyspnoea to maintain a half-sitting posture; his cheeks and lips were livid, a moderate amount of anasarca was present over his trunk and arms, while his lower extremities were markedly œdematous.

Auscultation of the lungs revealed a catarrh extending even to the finer bronchial tubes. The impulse of the heart could not be distinctly felt through the thoracic walls, and the area of percussive dullness over that organ was found much increased. The amount of urine secreted was small, and of high specific gravity. Under the use of the infusion of digitalis the symptoms ameliorated, the pulse became fuller, the anasarca diminished, and both the subjective and objective symptoms of the catarrh of the lungs disappeared. The condition of the heart remained about the same: the impulse was weak and indistinct; the sound feeble, but no murmur could at any time be made out. The man was sufficiently well on the 28th of the month to be discharged, at his own earnest desire.

From the 2d to the 17th of May he was in the hospital for treatment for a surgical affection, still suffering from shortness of breath and some palpitation, but had been able to work since his discharge, and did not complain in regard to his general health.

An examination of the heart gave the same result as on previous occasions; the pulse was small and soft, and, in a state of rest, scarcely 60.

On the 2d of June he again presented himself at the hospital, in a much worse condition than at the time of his previous admission. The symptoms were essentially the same as those of the previous attack, but more intense in character. The urine was scanty, and contained albumen; but after the use of digitalis the normal amount was secreted, and the albumen no longer appeared.

On the 4th of July the patient, much improved, was sent to his home in the Thuringian Forest, in the hope that he would there make more rapid progress towards convalescence.

On the 19th of September he came direct from his home to the hospital, and was again admitted, in a much worse condition than at his previous sojourn.

On the 5th of October, in spite of repeated prohibition, he rose from his bed and went to the closet, where he suddenly fell dead.

At the autopsy the body was found œdematous, the skin livid. Upon opening the skull, the meninges were found filled with blood, the brain-substance strikingly light in hue and œdematous, and the ventricles somewhat enlarged and filled with a clear fluid.

The pericardial sac was not changed, and the contained fluid was of normal quantity and character. The circumference of the muscular substance of the heart was quite double its normal size; the increase of the ventricles being proportional. The ventricles, as well as the auricles, were distended with fresh, dark blood. From the right ventricle the clots extended into the pulmonary artery, completely filling it and its larger branches. The walls of the cavities of the heart were thinned: the thickness of the wall of the left ventricle was one centimetre, that of the right half as much, and in some places but one-third of a centimetre. The muscular tissue in almost every portion was of a reddish-yellow color, at some places quite yellow, very relaxed, and quite readily torn. These changes were more advanced in the right than in the left ventricle. The papillary muscles were long and thin, and when cut across showed yellow streaks. The valves of the heart were unchanged, of normal thickness, and capable of perfect closure. A microscopic examination showed that the

muscles had undergone fatty degeneration, and that the striæ of the fibres were indistinct and had in some places vanished. The aorta and its larger branches, so far as examined, were unchanged.

In the kidneys, beginning fatty degeneration was found. The diagnosis of dilated heart with fatty degeneration was made at the time of the patient's first visit to the hospital. The fact of the dilatation was established by physical exploration; and the feeble pulse, and absence of impulse in conjunction with an organ increased in size, manifested a diminution of power. The question whether the diminished frequency of pulse is of pathognomonic value, as asserted by English authorities, is not discussed. No cause sufficient to account for the disease of the heart was discovered at the post-mortem examination. No valvular affection of the heart was present, nor was there anything that could interfere with the course of either the greater or the lesser circulation. The supposition that was made during life, that the changes in the liver and kidneys were secondary in their character, was also supported by the autopsy. The first change that took place in the heart was an excentric hypertrophy, affecting both sides, followed by fatty degeneration and consecutive thinning of the muscular walls of the heart. This conclusion would have been warranted by the anatomical conditions found at the examination, even if accurate and continued observation during life had been wanting, for it would not be possible that so great a dilatation could take place in a heart of normal size. It would be possible only in a heart which was already increased in size and then underwent dilatation. In answering the query as to the cause of original excentric hypertrophy, it must be established, as it was by the autopsy, that there existed no perceptible mechanical cause. But, inasmuch as the microscopic examination revealed only a true muscular hypertrophy, and as this form of hypertrophy is, as yet, attributed only to mechanical causes (true hypertrophy from work, of Rindfleisch), something which is not demonstrable on the cadaver must have acted during life in a similar manner. This being premised, it is easy to bring forward as the origin of the excentric hypertrophy in this case a cause similar to that given in the observations of Traube,—namely, severe and prolonged bodily exercise.

Upon the supposition that this was the cause of the hypertrophy, it is easy to explain the proportional involvement of both sides of the heart. The continued muscular effort of the left side, together with the reaction from the increased pressure of the column of blood in the aorta and its branches, would furnish the cause of the increase of the arterial side of the heart; while upon the other side of the organ a like effect would result from the increased activity of the respiratory function, and consequent disturbance of the lesser circulation. After the hypertrophy had existed for some time, the patient meanwhile continuing to make the exertions to which his diseased state was due, fatty degeneration began. At the time of the first admission of the patient into the hospital, eight months before his death, his heart, although in a state of fatty degeneration, still had power enough to enable him to attend to his work until an intercurrent attack of bronchitis overcame the force of the diseased and weakened organ, and forced him to his bed. At the time of his death, the relaxed heart still had force enough to maintain the circulation while the patient remained quiet in the horizontal position; but when he stood up and attempted to walk, the task was too great for it: a sudden paralysis of its functions took place, and an acute œdema of the brain occurred, resulting in instant death.

WM. ASHBRIDGE, M.D.

ANEURISM OF THE EXTERNAL ILIAC (*The Lancet*, December 20, 1873).—Mr. Wheelhouse reports the following interesting and unusual case: A man, æt. 31, of temperate habits, applied at the infirmary for treatment; and, on examination, there was found a large pulsating and expansile tumor in the right iliac fossa, reaching from Poupart's ligament upwards to within two inches of the umbilicus, and extending in an outward direction almost to the spine of the ilium. It was about the size of a small cocoanut, hard and firm at the lower part, and softer in the upper portion, with pulsations and dilatations synchronous with the pulse in the left femoral artery. The swelling appeared to be connected wholly with the external iliac artery, but to extend above and overlap the common iliac; and, although pressure could not be made on the latter sufficient to stop the beating, it was easily controlled by pressure on the abdominal aorta just above its bifurcation.

Treatment by compression was determined upon; chloroform was administered until the muscles were relaxed, when ether was substituted, and its action kept up continuously for five hours. Lister's large abdominal tourniquet was applied just over the umbilicus, and slowly screwed down until the flow of blood through the aneurism was arrested. In about two hours, the foot becoming cold and blue, the tourniquet was unscrewed slightly; pulsation in the tumor returned, and it was at once reapplied. Two hours later the right limb was blue to the groin, and the left to the knee. Pressure was then slightly relaxed, the tumor being much harder, but still perceptibly pulsating. At the end of another hour both limbs were black, and the body was blue as far as the tourniquet, which was then removed gradually in fifteen minutes, a quarter-turn of the handle being taken every minute. The tumor had ceased to pulsate, and was firm and hard. The limbs were wrapped in wool, and a hypodermic injection of morphia given. On the following day pulsation returned in the tumor with considerable force, but slowly diminished; and by the next evening the tumor was almost fully reconsolidated, and both limbs were normal as to warmth. The cure was complete and permanent.

THE PHYSIOLOGICAL ACTION OF OZONE (*The British Medical Journal*, December 13, 1873).—Dr. McKendrick and Mr. Dewar, in the course of some experimental investigations with animals, found that—

1. The inhalation of an atmosphere highly charged with ozone diminished the number of respirations per minute.

2. The pulsations of the heart were reduced in strength, and this organ was found beating feebly after the death of the animal, which showed that life was not destroyed by direct action on the heart.

3. The blood was always found in a venous condition in all parts of the body, both in cases of death in an atmosphere of ozonized air and of ozonized oxygen.

4. Ozone exercised a destructive action on the living animal tissues if brought into immediate contact with them, but it did not affect them so readily if they were covered by a layer of fluid.

5. Ozone acted as an irritant to the mucous membrane of the nostrils and air-passages, as all observers had previously remarked.

VACCINATION FROM A VARIOLOUS PATIENT WITHOUT COMMUNICATING SMALLPOX (*The British Medical Journal*, December 13, 1873).—During an epidemic of smallpox in a small town, a boy, fourteen years of age, was vaccinated; the arm took well, and about a dozen persons were re-vaccinated from it. On the thirteenth day the boy went to bed with an attack of confluent smallpox; was very ill for a week, and then rapidly recovered. No variola was communicated in any of the cases, and all the arms took well.

PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

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EDITORIAL.

OUR NEW CHARITY.

AMID the multiplicity of charities which distinguish the progressive civilization of the times, and which in their broad beneficence seek to alleviate human misery, there has been, until recently, in this community, one class for which no organized effort has been made,—a class which on no principle, it would seem, should thus have been left outside the pale of humanitarian and Christian helpfulness.

While the enemies of society, the murderer and the burglar, have been made the objects of philanthropic endeavor, no hand has been outstretched to rescue from utter ruin those who, but for one false step, were worthy members of the community.

Surely, if deliberate, calculating fraud, villany, and outrage do not exclude their perpetrators from helpful pity, one effort at least might well be allowed in behalf of those whose transgression, however great, illustrates human infirmity rather than depravity. Efforts to relieve and reclaim are not arguments in extenuation; but "Go and sin no more" comes to us with a sanction which we dare not despise.

To the shame of our great city, the class of unfortunates alluded to has hitherto had but three alternatives,—murder, suicide, or the Almshouse. Of the inevitable results following exposure to the associations of that institution, it is not necessary to speak. For such as these, over its portals might

well be written, "Abandon hope, all ye who enter here!" Apart, moreover, from any claim to sympathy which may be urged in behalf of the erring ones, there can be no question as to the propriety of securing for their innocent offspring more favorable auspices than a birth in the County Poor-House would afford.

Impressed by considerations like these, a few gentlemen met together about one year since, to devise some plan by which, even if the sorrows of these deluded creatures might not be mitigated, the necessity of a life of open shame should at least be spared them.

As the result of the conference, the STATE HOSPITAL FOR WOMEN AND INFANTS was developed, a Board of Governors and a Medical Staff were organized, a house (No. 1718 Filbert Street) was rented, and, thanks to the energy, enterprise, and unremitting industry of a few ladies, whose co-operation had been solicited, the house was comfortably furnished. An excellent matron has superintended the internal economy of the house; and the periodical visits of the ladies' committee have contributed in no small degree to the success of the undertaking, and to arrangements by which discharged patients could reputably maintain themselves.

During eleven months since the opening of the hospital, forty patients have availed themselves of the asylum thus afforded; and eighteen are now either under its roof or registered for early admission. No loss of life has occurred among the patients; and homes have been provided, by adoption or otherwise, for most of the children born in the institution.

Another object contemplated in the establishment of the hospital was a provision for the treatment of worthy women requiring skilful medical care and nursing, to enable them to maintain their families instead of dragging out a miserable and painful existence, not only helpless, but a burden to others.

Either class of patients is required, when able, to contribute according to their ability to the support of the institution; but very many must be provided for out of the funds of the hospital.

For the objects of this new charity, thus set forth, a most earnest appeal is made by the Board of Governors. The needs of erring and suffering women, the reasonable hope that they may not only be saved from greater error or suffering, but restored to lives of usefulness, are the arguments on which the appeal is based. Whether the enterprise shall succeed, depends upon the benevolence and the Christian convictions of the community. It will

be a sad commentary upon the intelligence of our vaunted philanthropy if frailty must needs degenerate into depravity before succor is tendered,—if the Midnight Mission and the Magdalen Asylum must remain the only or the nearest cities of refuge.

The President of the Board of Governors, Dr. J. W. White, will be happy to receive substantial encouragement for this worthy enterprise.

SELECTIONS.

EUCALYPTUS GLOBULUS: ITS USE IN THERAPEUTICS AND ITS VALUE AS A FEVER-DESTROYER.

THE therapeutic value and uses of the *Eucalyptus globulus* are thus described by Dr. S. Ringer in the *London Medical Record*:

In March, 1870, M. Cloez announced that *Eucalyptus globulus* consists of chlorophyl, cellulose, essential oil (eucalyptol), resin, tannin, lime, and alkaline salts. M. Debray (*De l'Eucalyptus Globulus*, Paris, 1872) and M. Rabateau (*Communication à l'Académie des Sciences*, November, 1872) confirm these researches. Eucalyptol, a liquid camphor, $C_{10}H_{16}O_2$, possesses almost all the active properties of the plant, which does not contain an alkaloid. When applied to mucous membranes, eucalyptol excites congestion according to the strength of the application. A few drops produce a sensation of coldness in the mouth, whilst one or two grammes (15.5 to 31 grains) excite disagreeable warmth in the mouth, and pain in the stomach and intestines. A small dose promotes appetite, a large one destroys it.

Gimbert employs small quantities of the essential oil, on account of its antiseptic and stimulant properties, in tooth-powders, gargles, eye-washes, and applications to wounds, especially unhealthy wounds. It can be given in capsules; and, by administering it with food, we avoid irritation of the œsophagus or stomach.

A moderate dose of eucalyptol, ten to twenty drops, at first accelerates the pulse, produces pleasant general excitement, shown by irresistible desire for moving about, and a feeling of buoyancy, increased appetite, strength, and sexual appetite. It is an intoxicating medicine, but, unlike opium or a large dose of alcohol, these effects are not followed by brutishness and torpor, but produce a general calmness and soothing sleep. Intoxication is not constant; often it only stimulates. M. Gubler says this excitement may amount to fever; and Gimbert believes that he has produced fever in a dog by subcutaneous injection. M. A. Sicard suffered from a severe attack of migraine after inhaling eucalyptol. In one case it produced cerebral congestion, with much excitement, and in another painful palpitation of the heart. This essential oil, however, rarely provokes these symptoms, and in strong men only after ten or twelve drops, while five to six drops may produce them in nervous persons.

It affects animals as man. They become active, and their senses are made more acute. Excitement is followed by tranquillity and lethargy. Arterial tension is diminished; the temperature falls. Circulation is stimulated by the action of the remedy on the sympathetic. Even moderate doses, if continued for some time, produce an asthenic state. The temperature falls a degree to a degree and a half below natural. The pulse becomes less frequent, and may fall to fifty beats per minute. The senses (and the muscular sense) are

blunted. The functions of the brain are unaffected, there is no stupor, and the size of the pupil is unaltered. The reflex functions of the cord are depressed. These symptoms, rare in young and vigorous people, but more easily produced in old persons, may excite alarm, but are without seriousness, and are removed by a cup of coffee. Eucalyptus, when fatal, kills by destroying the excito-motor functions of the cord; the temperature also falls considerably. An old man with vesical catarrh took, by mistake, eighty drops of eucalyptol, which produced feeling of internal heat and paralysis of the extremities. He had only an objective consciousness of his extremities, and when he shut his eyes he was unaware of their existence. When he wished to move his arms or legs they obeyed him imperfectly, the movements being feeble and disorderly. The sphincters retained their tonicity. A cup of coffee removed these symptoms.

Gimbert says there is a close resemblance between eucalyptol and bromide of potassium. He thinks the decline of the temperature important, and that it will guide us in the employment of this remedy, for in poisoning it falls rapidly; and hence the thermometer must be employed when we administer this medicine to produce its sedative effects, as in scarlet fever, tetanus, or other acute illnesses. Dangerous results may be averted by a few cups of coffee.

As in some doses it stimulates the sympathetic and promotes capillary circulation, he recommends it in congestions and paralysis of the capillaries. It will disperse many cerebral and pulmonary congestions, but whilst serviceable in chronic bronchitis, it overstimulates in acute. Piles sometimes disappear during its administration, perhaps from the local effects, but most likely from its effects on the pelvic sympathetic. In large doses the stimulating effects of this essential oil are slight, and it soon produces asthenia and then paralysis.

Eucalyptol is absorbed by the stomach and lungs. It is eliminated by the lungs (for the breath smells of it even after an anal injection), the kidneys, and skin. In its passage through the lungs it contracts the capillaries, promotes circulation, and hence deepens respiration, and thus in lung-complaints it removes congestion. Elimination may excite irritation of the bronchial tubes (shown by increased cough and hæmoptysis if there be tubercle) if it be administered in too large doses or in unsuitable cases. Gimbert is doubtful concerning its usefulness in checking hæmoptysis; he thinks it may be good where the capillaries only are ruptured, but in hæmoptysis due to softened tubercle he considers it highly dangerous.

It is eliminated by the kidneys in an oxidized form, and makes the urine smell of violets; the powder and tincture, however, produce a herbaceous smell, or leave the smell unaffected. Gubler believes it is chiefly eliminated by the lungs. It greatly increases the elimination of urea: thus, Gimbert usually passes twenty grammes in the twenty-four hours, but under the influence of this medicine he voided forty grammes in the same time. The urine is yellow and clear after eucalyptol, but red after the powder. The essential oil escapes through the skin, rendering the sweat odorous and sometimes producing eruptions. Gimbert gives the following conclusions. It is an antiseptic, by preventing decomposition of organic substances, and particularly of blood. It is a powerful general stimulant, through its primary action on the nervous centres and sympathetic, thereby quickening the capillary circulation. Through its influence on the nervous system, it is antispasmodic. By diminishing the excito-motor activity of the cord, by lessening animal combustion, the frequency of the respiration, and the circulation, it becomes a febrifuge and sedative.

He recommends as applications for neuralgia the essential oil, a few drops sprinkled on flannel, or the following liniment: Eucalyptol, eight grammes; oil of sweet almonds, forty grammes. Internally, he prefers either the essential oil or a liquid extract, preferring it to the powder, which is bulky and difficult to digest. Burning the leaves removes bad smells from sick-rooms, and the fumes inhaled afford relief in chronic bronchitis. As cigarettes, the leaves are useful in humid asthma.

Dr. A. B. Stout merely confirms many of the conclusions of the previous writer. When the empyreumatic oil of the leaves is evaporated, it diffuses an agreeable odor throughout the house. He considers that the oil is allied to creasote and to pyroligneous and carbolic acids; hence its disinfectant and antiseptic qualities. He believes that the powder of the dried leaves scattered in trunks and among clothes will be as useful as camphor or tobacco in driving away or destroying moths and insects, and more agreeable. It is very valuable as a sedative and antiseptic in asthma, throat-diseases, nasal catarrhs, and affections of the mucous membranes.

Like Gimbert, he uses a concentrated tincture (one part of spirit to one of liquid extract), and employs this as an inhalation, which quickly relieves the spasms of asthma. He adds a tablespoonful of the tincture to the boiling water. Cigarettes made with coarsely-powdered leaves are anodyne and antispasmodic.

Eucalyptus globulus (blue gum-tree) is a native of Tasmania, but is largely cultivated in the south of France, Spain, Algiers, etc. Dr. Lorinser (*Wiener Med. Wochenschrift*, No. 43, 1869) published some cases of intermittent fever successfully treated by a tincture in two-drachm doses made from the leaves. Dr. Bohn (*British Medical Journal*, March 2, 1872, from *Berliner Klin. Wochenschrift*, February 26, 1872) finds it useful in the fever of hectic as well as ague. Dr. Joseph Keller (*British Medical Journal*, May 11, 1871) treated 432 cases with this remedy; 71.76 per cent. were cured, 28.24 required quinia in addition. Of the 310 patients who were cured, no paroxysm occurred after the first dose in 202. Of 118 cases in which quinia had been given unsuccessfully, 91 recovered under the use of eucalyptus. Dr. Keller believes the plant grown in Austria is less efficacious than that imported from Australia. He considers it of especial use in obstinate ague which has resisted quinia, and that the average duration of treatment by eucalyptus is shorter than that by quinia. He uses a tincture made from the leaves (ten pounds of the leaves yielded twenty-five quarts of tincture). The average dose was two drachms, and the average quantity used for each patient was seven drachms.

Dr. Maclean (*The Practitioner*, November, 1871) recommends this medicine for the dyspnoea occurring in thoracic aneurisms and heart-disease. It should be smoked in a pipe, with or without tobacco, or the leaves may be made into a cigarette. If the dyspnoea be too severe to permit smoking, the patient should inhale the fumes from the burnt leaves.

GLEANINGS FROM OUR EXCHANGES.

THE EFFECT OF FRESH CHOLERAIC EXCRETIONS ON ANIMALS (*The British Medical Journal*, December 13, 1873).—Dr. Andreas Högyes, of the University of Pesth, availed himself of the opportunity afforded by the recent epidemic of cholera in that city, to make a series of investigations on the effects produced on animals by the discharges from persons suffering from the disease.

He found that such discharges are capable of exerting a deleterious influence on the organism, and that gastric and intestinal catarrh, artificially produced, increases the liability to be affected by them. Air is capable of carrying with it particles of choleraic evacuations, and of producing very injurious effects; when the cholera-evacuations were disinfected with carbolic acid, or when those of ordinary diarrhoea were used, the inhalation of air which had been passed through them was followed by no evil results. In a like manner air saturated with the fluid from decomposing meat was comparatively harmless. He also found that a current of air passing through non-disinfected choleraic excretions carries with it cryptogamic elements, which vegetate abundantly in a favorable soil; while the same growths from discharges that have been disinfected by carbolic acid are incapable of multiplication; and he believes that choleraic discharges freed from organized elements are capable, by reason of their chemical composition, of producing the same pathological changes as they do when they contain the organized forms.

While the experiments were being carried on, the attendant, who had been exposed for some time to the emanations from the vessels containing the choleraic excreta, had a severe attack of gastro-intestinal catarrh, which recurred twice within a short period. His little daughter, who slept with him, had vomiting and diarrhoea the day after he became ill. Five days after his illness, two cases of cholera (one of which ended in death) occurred in the house in which he resided, which had hitherto been free from the disease. During the microscopic examination of the choleraic discharges, Dr. Högyes had loss of appetite, a coated tongue, and a constant sensation of oppression in the epigastrium; after the researches were complete, these uncomfortable feelings disappeared.

CASES ILLUSTRATING THE USE OF THE PNEUMATIC ASPIRATOR IN SURGERY (*The Boston Medical and Surgical Journal*, December 25, 1873).—Dr. Charles D. Homans reports the following cases in which the pneumatic aspirator was employed beneficially. A laborer, æt. 54, had an oblique inguinal hernia which became strangulated and remained so for three days. The hernial mass was about the size of a hen's egg, and very tender; taxis was tried unsuccessfully for half an hour, and then a fine aspirator-needle was thrust into the tumor, and from three to four drachms of fluid containing bubbles of air were withdrawn. Taxis was then again resorted to, and the hernia immediately returned. No unfavorable symptoms supervened. In a second case of strangulated hernia the tumor was punctured three successive times, but no fluid or gas passed out. The ordinary operation was then resorted to, and the tumor found to consist wholly of intestine tightly compressed, which explains why no fluid or air came from the puncture.

In a case of retention of urine, the bladder not having been emptied for thirty hours, and all attempts to introduce a catheter having failed, the needle was passed into the bladder behind the pubis and three pints of urine were drawn off. The bladder was again punctured on the following day, after which the urine came naturally, no bad effects resulting from the operation.

PERFORATION OF THE DUODENUM (*Vermont Medical Journal*, January, 1874).—Dr. A. P. Grinnell reports the case of a man æt. 55, who was suddenly attacked with severe epigastric pain while walking. The case was deemed one of colic, and was treated accordingly. In six hours the pain was less intense, pulse 80, and general condition apparently excellent; the following morning he rode seven miles to his home, and four hours later his pulse rose to 110, his extremities were cold,

respiration was difficult, and he complained of excessive thirst. These symptoms all increased in severity, and he died thirty-three hours after he was first attacked. The post-mortem revealed a perforation of the duodenum one-half inch from the pylorus, through which had passed into the cavity of the peritoneum all substances taken as food or drink during his illness. An ulcer was discovered near the point of perforation, but no deviation from health was observable in other portions of the intestines or in the stomach. The peritoneum was inflamed over the greater portion of its surface, and large quantities of pus had accumulated in the pelvic regions. The case is peculiar from the absence of prominent symptoms. The pulse was unaffected until a few hours before death. There was no chill to usher in the peritonitis; there was no nausea, vomiting, or tympany, and he had never had any gastric or abdominal pain before the perforation occurred.

RETENTION OF URINE (*The Lancet*, September 27, 1873).—A sailor, æt. 26, after a protracted gleet, became affected with a severe urethral stricture, which finally produced almost complete retention of urine, only a few drops escaping involuntarily. No instrument could be introduced into his bladder. Four leeches were applied to his perineum, and he was ordered to remain in bed. In a short time a fine filiform bougie was passed into his bladder, and was left there for thirty-six hours, when it was followed by a No. 5 French whalebone bougie; larger sizes were then successfully passed until a complete cure was effected. In remarking on the case, Mr. Teeran said that there were few strictures, however severe, which would not yield to a combined assault with leeches and filiform bougies, and they could be employed on the most diseased subjects without the slightest fear. They would also, as a rule, obviate any recourse to operative procedures.

MISCELLANY.

UNIVERSITY HOSPITAL.—At the meeting of the Board of Trustees of the University of Pennsylvania, on Tuesday, January 6, an organization of the new hospital to be connected with the medical department of the institution was decided upon. The Board of Managers is to be composed of eighteen members: five trustees, elected yearly by the trustees; the seven Professors of the regular faculty; three alumni, chosen by the executive committee of the Society of the Alumni; and three contributors, elected by the contributors. The elections of the last six have to be confirmed by the general board of trustees before they are valid. Every person who has given twenty-five dollars is declared a contributor. Four new professorships were created,—the incumbents to serve without salary, and to be entitled Professors in the Hospital of the University: one of clinical medicine, one of clinical surgery, one of clinical obstetrics and diseases of children, and one of ophthalmology. These professors are, with certain lecturers, to constitute the medical staff of the hospital. The decision as to what lectureships shall be created, and the appointment of lecturers, are left to the medical faculty.

The general management of the hospital is to be intrusted to the Board of Managers, but the medical staff is to have the decision of such questions as the division

of beds. The Trustees of the University retain the right to modify the above plan if at any time it should seem best.

We congratulate the Collecting Committee on the great success which their energy and skill have secured for the movement. Including the value of the land, the whole sum secured approximates \$800,000.

THEN AND NOW.—"Formerly, the great aim of the surgeon was to accomplish his awful but necessary duty to his agonized patient as rapidly as possible, and a clinical clerk, with a watch, always stood by to note the time so occupied. Mr. Herbert Mayo performed amputation at the hip-joint in ninety seconds. Mr. Edward Hutton amputated the middle of the thigh in seventy-eight seconds; and I have heard Jobert de Lamballe pronounce, not very slowly, the words, *un, deux, trois*, while he, with lightning speed, removed an arm at the shoulder. We have changed all this. We operate, like the sculptor, upon an insensible mass; we go carefully through our work, and, although accomplishing it as quickly as we can, we do not count the seconds."—*Prof. Quinlan*, in *Medical Times and Gazette*, November 8, 1873.

ARTIFICIAL BUTTER.—This new commodity, manufactured from beef-suet, having met with an extensive sale in London and Paris, is now being introduced by M. Paraf into the markets of New York and Boston. We must admit that the single specimen seen by us had both the appearance and taste of ordinary firkin butter. The butter is made from the yellow, tasteless, and odorless oil that is obtained from beef-suet. This oil is placed in churns, with one-fifth its weight of sour milk, and churned until an emulsion is formed, annatto being added to give it the required color. It is then cooled, and worked, and salted like common butter.—*Boston Medical and Surgical Journal*.

NOTES AND QUERIES.

BLUE PUS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In the last number of the *Times*, December 27, under the head of "Notes and Queries," Dr. Cohen reports a very interesting case of the discharge of blue pus from an abscess due to laryngeal chondritis, and asks for "any information on this subject, communicated personally, or through the medium of the *Times*."

In the *British Medical Journal* for December 13, 1873, under the heading "Cyanopuon Laryngis: Thyroiditis with Blue Suppuration," is the record of a case by Sir G. Duncan Gibb, M.D., which is almost a duplicate of Dr. Cohen's.

Dr. Cohen says he was unable to determine the location of the abscess, but was inclined to believe it "connected with the cricoid cartilage." Dr. Gibb says the abscess in his case was "consequent upon inflammation of the ring of the thyroid cartilage," and upon puncturing it "a drachm and a half of pus was evacuated, of a dark blue color, not quite so dark as Prussian blue, but more of an azure tint." For a week some discharge of the blue pus continued; after this, though pus was discharged, it was not discolored; and by the twenty-fifth day the opening had closed, and the patient was considered cured.

The original seat of the trouble, according to Dr. Gibb, "seemed to have been beneath the perichondrium of the thyroid cartilage," and although "in the laryngeal mirror the integrity of the larynx was seen to be perfect, and the voice was good, whether in speaking or in attempts to utter

contralto notes," yet necrosis or other trouble of the thyroid cartilage was feared. However, the case occurred in October, 1870, and he says two years have now elapsed without any subsequent trouble.

Dr. Gibb refers to a case of his, published in the *British-American Medical and Physical Journal* for September, 1850, which has been quoted by Mr. Holmes Coats in the article "Abscess" in Holmes's Surgery, and to another brought before the British Association for the Advancement of Science, in 1864, by Dr. Herapath. Dr. Gibb, in experimenting to determine the nature of the discharged fluid, says,—

"1. Liquor potassæ added to the blue pus discharged the blue color, which it does with Prussian blue.

"2. The addition of dilute nitric acid for the most part restores the blue color, which it also does with Prussian blue.

"3. Some of the pus was evaporated to dryness, and ignited; the calx, acted upon by a solution of the ferrocyanide of potassium, gave a distinct alteration of Prussian blue."

The patient had not been taking any preparation of iron recently. Dr. Gibb looked upon it as "due to some physiological change analogous to that which gives rise sometimes to indigo in the urine," and places the case on record as "unique in its combination of thyroiditis running into suppuration, the pus being charged with a salt of iron, giving to it a decided dark blue color."

In the *Archives Générales de Médecine* for December, 1873, there may be found a very interesting paper by M. Maurice Longuet, entitled "Mémoire pour servir à l'Histoire de la Coloration bleue des Linges à Pansement," in which he records what may be entitled an "epidemic of blue suppuration," for in his ward in La Charité he had twenty-two cases. M. Longuet objects to the term *blue suppuration* which has hitherto been used to designate such cases, for he was able to produce the blue coloration on the sound portions of the bodies of some of his patients who were yielding the *blue pus* simply by dressing the parts in the same manner as the wounds. Unlike the reaction in Dr. Gibb's case, Dr. Longuet, on repeating the experiments made by Dr. Rouher, of Strasburg, in 1860, found, as he says, that "ils rejettent bien loin cette idée qui attribuait l'apparition de cette teinte à la production du bleu de Prusse ou de phosphate de fer aux dépens du fer contenu dans le sang et des phosphates alcalins ou des combinaisons cyanurées séparées des liquides animaux par suite d'une altération quelconque."

He, however, closes the first part of his article by acknowledging a difference between the *blue pus* of open wounds and that which is "*primitive ment bleu*," as flowing from a freshly-opened abscess.

The coincidence between Dr. Gibb's and Dr. Cohen's cases—both coming from the cartilages of the throat—would predispose one to think that the laryngeal cartilages, or perhaps cartilage *per se*, were essential to its production; but M. Longuet says that in the practice of M. Richet at the Hôtel-Dieu, early in last year, he saw *blue pus* flow out of an abscess of the breast at the moment of lancing it.

JOHN D. JACKSON.

DANVILLE, Ky., January 2, 1873.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In looking over the number of your journal for November 8 I came across an article entitled "Is the Presence of the Hymen a Proof of Virginity?" by Charles W. Brown, M.D. As I have just had a case in which labor was complicated with the presence of the hymen, the article attracted my attention, but on close inspection I found it rather indefinite.

We find that Dr. Brown makes the following statements: "Upon examination I found the hymen *intact*, and *quite firm and rigid*;" continuing, he tells us that at the lower part of the membrane was a small aperture through which he was unable to introduce the tip of his little finger without some difficulty. The parts were *excessively tender*; this small aperture was gradually dilated by constant pressure of *two hours*; at the end, he was able to introduce his first and second fingers, and find out the condition of the uterus; this being done, an opiate was given, and exit doctor for three hours, *while the hymen makes its exit not to return*; for it is not mentioned after this. Now the question arises, What became of the hymen? Did it *dilate* with the uterus? Did it rupture, or did the doctor operate?

The first is not likely to have occurred; and his description would lead us to infer that it was too rigid to rupture, for, according to his statement, after a constant pressure of *two hours* the orifice was only large enough to admit of the introduction of the first and second fingers, and that with difficulty.

The third can be answered by a negative; for, had the doctor operated, he would not have omitted reporting it. Now, again we repeat, What became of the hymen? for we see that labor has been completed by forceps. Now, if the hymen has remained intact,—for as such the doctor

leaves it at his first visit,—he must have applied the forceps and delivered the child through an opening of an inch and a quarter in circumference,—a thing highly improbable.

I remain yours, respectfully,

EUGENE P. BERNARDY, M.D.,
1011 Walnut Street, Philada.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I have noticed the article which appeared in the last issue of the *Medical Times* under the heading of "Notes and Queries," selecting me as a subject through whom a thrust at the dignity of the dental profession might be made, and implying my professional status as being questionable. I trust you will do me the simple justice to publish a brief reply. First, I am a regular graduate of dentistry. Second, I have adopted the administration of nitrous oxide for the painless extraction of teeth as a *special business or practice*. I do not practise dentistry, therefore the dental profession is *not in any manner responsible for my business*. My position in relation to the dental profession may be likened to that of the apothecary in his relations to the medical profession. The medical practitioner would not enjoy being obliged to compound his prescriptions; and the manufacture and administration of nitrous oxide involve so many troublesome details that it is a like convenience to the dentist to be able to send his patient to some one who makes a special business of that branch. The fact that I advertise renders me ineligible to become a member of the dental societies; and, being fully aware of this, I have never sought to become one. Therefore I am not a suitable subject through whom to make a thrust at the status of the profession. Neither am I a proper subject for unkind or personal criticism. I am conscientiously following a humane calling, and know that I am doing a vast amount of good in relieving the sufferings of my fellow-beings, and have every reason to believe that I enjoy the confidence and respect of the majority of our most eminent men in the medical and dental professions, and of the people of Philadelphia. Dentists in regular practice who have attempted to use nitrous oxide have generally been discouraged in using it, and many have abandoned it as an anæsthetic; why? It is because it is a very peculiar business, requiring great experience to enable one to make it successful. I am charged, because I have made use of the public press to place my name and business before the public, with violating my professional trust, and ignoring the "code of ethics" of the profession. To say the least, this is a discourteous fling, when it is considered that had it not been for the public press the community would not be reaping the benefits of this great boon, as the professions did not, and would not, accept it in the character of an anæsthetic until it became so popular through this medium that they were obliged to award it position as such.

Trusting the next effort made to impugn the status of dentistry as a profession may find a more suitable scapegoat than your humble servant,

I am, very respectfully, yours,

F. R. THOMAS, D.D.S.

Philadelphia, January 8, 1874.

[We insert the letter of Dr. Thomas with pleasure, and take the opportunity of stating that the gentleman who wrote the answer to "Dens" was mistaken in his qualified assertion that the dentists have no code of ethics. Leading dentists inform us that Dr. Thomas—as he himself states—is not recognized by the dental profession as belonging in its ranks, and one sitting in authority tells us that he holds the same relation to the dental profession that Kolbe the splint-maker, or Smith the leecher, does to the medical profession. Like ordinary folk, we thought it was the function of dentists to extract teeth, and, when we saw dentists of standing recommending patients to Dr. Thomas for the removal of sinning bicuspid and molars, concluded he was a dentist—beg pardon, an oral surgeon. It seems he is not. What with seeing oral surgeons amputate limbs, remove arachnoidal tumors, cut, slash, divide everywhere, and with hearing that men who extract teeth are not oral surgeons, our finite mind is very much befogged. It's here you see it and there you don't, until under what thimble the ball is we can't tell.—Ed. P. M. T.]

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 6, 1874, TO JANUARY 12, 1874, INCLUSIVE.

CAMPBELL, A. B., ASSISTANT-SURGEON.—Assigned to duty at Fort McIntosh, Texas. S. O. 1, Department of Texas, January 3, 1874.